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FEB **0 6** 2003

TECH CENTER 1600/2900

EXHIBIT B PENDING CLAIMS AS OF FEBRUARY 3, 2003 APPLICATION SERIAL NO. 09/808,504

- 1. A method for detecting base changes in a nucleic acid of interest which comprises the following steps:
 - (a) contacting the nucleic acid of interest with a suitable reference nucleic acid under suitable conditions such that the nucleic acid of interest forms a heteroduplex with the reference nucleic acid;
 - (b) contacting the heteroduplex with a suitable nuclease or a combination of suitable nucleases so as to selectively cleave the heteroduplex at a position of a base change on the nucleic acid of interest with respect to the reference nucleic acid;
 - (c) ligating a DNA fragment with a defined sequence to the cleaved heteroduplex; and
 - (d) detecting the ligated DNA fragment under suitable conditions so as to determine the presence and location of the base change.
 - 2. The method claim 1 wherein the base change is a single base change.
 - 3. The method claim 1 wherein the nucleic acid of interest is RNA.
 - 4. The method of claim 3 wherein the RNA is expressed from a cDNA library.
 - 5. The method of claim 1 wherein the reference nucleic acid is DNA.
- 6. The method of claim 1 wherein the reference nucleic acid is a circular nucleic acid.
 - 7. The method of claim 6 wherein the suitable nuclease is S1 nuclease.
- 8. The method of claim 6 wherein the combination of suitable nucleases is S1 nuclease and RNAase I.

- 9. The method of claim 1 wherein the DNA fragment has the sequence set forth in figure 2.
- 10. A kit for detecting base changes in a nucleic acid of interest which comprises the following components:
 - (a) a suitable reference nucleic acid capable of forming a heteroduplex with the nucleic acid of interest;
 - (b) a suitable nuclease or a combination of suitable nucleases capable of selectively cleaving the heteroduplex at a position of a base change on the nucleic acid of interest with respect to the suitable reference nucleic acid;
 - (c) a DNA fragment of defined sequence capable of being ligated to the cleaved heteroduplex; and
 - (d) a means to detect the ligated DNA fragment.
 - 11. The kit claim 10 wherein the base change is a single base change.

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